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10/777,299

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Paul E. Share

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EXAMINER

DANIELS, MATTHEW J

ART UNIT

PAPER NUMBER

1791

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/777,299	<b>Applicant(s)</b> SHARE ET AL.	
	<b>Examiner</b> MATTHEW J. DANIELS	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-12,14-21 and 25-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-12,14-21 and 25-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

### Rejections over Collette

1. **Claims 1-3, 5-21, 25-33** are rejected under 35 U.S.C. 103(a) as obvious over Collette (5759653).

**As to Claims 1 and 31**, Collette teach a method comprising the steps of: (a) forming a preblend/masterbatch (col 5 lines 6-7) comprising: a diluent polyester (col 5 line 17), a polyamide material (col 5 line 18), and an oxygen scavenging material (col 5 line 19) having the claimed concentration (10:30-37 and Claim 16); providing a base/core layer polyester (col 5 line 31); introducing the preblend and the base polyester into a molding apparatus to permit melting and admixing of the preblend and the base polyester (col 5 lines 29-65); injection molding or extruding the admixture in the apparatus to provide a preform (fig 3, 59); and expanding the preform to provide a plastic container having a barrier layer formed from the admixture of the preblend and polyester (fig 6 & 7), wherein the plastic container and barrier layer has oxygen scavenging property that is activated after filling the container with an aqueous fluid (7:24-33, 7:59-63, 8:46-51). Collette also teaches forming bottles with catalysts that are activated by heat (7:32) and hot fill applications (7:61), which would therefore activate the catalyst during filling. If it is ultimately determined that Collette activates before filling, this limitation is drawn merely to a rearrangement of process steps disclosed by the prior art, and in view of Collette's teaching

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of methods in which the catalysts are activated, one would have found it obvious to rearrange the order of filling and activation.

Collette does not explicitly teach that the container is “stable during unfilled storage”. However, in this regard, Collette suggests that catalysts are activated by oxygen (7:30), heat (7:32), or moisture (7:2-6), and that the stability (shelf life) of the bottles may be improved by refrigeration, desiccation, or storing in a modified atmosphere environment (7:24-28). Thus, although Collette is silent to the stability, Collette teaches storage conditions which would improve the stability of the bottle.

**As to Claim 2**, Collette teach that the plastic container is a multilayer plastic container (fig 7).

**As to Claim 3**, Collette suggest that monolayer plastic containers are known and conventional in the prior art (col 1 lines 47-51).

**As to Claim 5**, Collette teaches the same preblending process, and (see the rejection of Claim 1 above), and thus the preblend would implicitly exhibit the claimed characteristics despite that Collette is silent to comparing the preblend with the claimed hypothetical mixture.

**As to Claim 6**, Collette et al teach that the preblend is in a form of solid particles (col 5 line 26).

**As to Claim 7**, Collette et al teach that the diluent polyester is present in the preblend in an amount of about 25% to about 75%, by weight of the preblend (col 16 line 3-7).

**As to Claim 8**, Collette et al teach that the diluent polyester comprises polyethylene terephthalate and polyethylene naphthalate (col 14 line 22-27).

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**As to Claim 9**, Collette teaches that the base polyester contains a substantial portion virgin PET, which would implicitly be bottle grade (16:12-14). It is noted that Claim 19 of Collette is drawn to “on the order of 50% post consumer PET” (15:15-20). However, the Examiner’s position will be that the additional post consumer PET does not materially affect the basic and novel characteristics of the claimed invention because it provides PET material which would have the same or substantially the same structure as the virgin material.

**As to Claim 10**, Collette et al teach that the polyamide material is present in the preblend in an amount of about 25% to about 75%, by weight of the preblend (col 15 line 7-11).

**As to Claim 11**, Collette et al teach that the polyamide material comprises a polymer containing m-xylylenediamine monomer units (col 10 line 51).

**As to Claim 12**, Collette et al teach that the polyamide material comprises a polymerization product of m-xylylenediamine and adipic acid (col 10 lines 51-52).

**As to Claims 13-15**, Collette et al teach an oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million, by weight and comprises cobalt or a metal complex thereof (col 10 lines 24-37).

**As to Claim 17**, Collette et al teach that the base polyester is in a form of solid particles (col 5 lines 59-67).

**As to Claim 18**, Collette et al teach that the preblend and the base polyester are admixed in an amount of about 0.5% to about 20%, by weight, of the preblend, and about 80% to about 99.5%, by weight, of the base polyester (col 16 lines 8-11).

**As to Claim 19**, Collette et al teach that the base polyester is polyethylene terephthalate (col 5 line 31).

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**As to Claim 20**, Collette et al teach that the polyethylene terephthalate comprises a virgin bottle grade polyethylene terephthalate, a post consumer grade polyethylene terephthalate, or a mixture thereof (col 5 lines 11-32).

**As to Claim 21**, Collette et al teach that the preform contains about 10 to about 80 ppm, by weight, of the oxygen scavenging material (col 1 line 53).

**As to Claim 25**, Collette teaches that the containers are maintained in refrigeration or desiccation (7:25-28), and hot filling (7:61) or filling with water (8:46-51), which would inherently activate the oxygen scavenging property for those catalysts which activate at room temperature (7:29-30). Alternatively, this aspect of the invention is drawn to a rearrangement of process steps disclosed in the prior art, which is generally deemed to be prima facie obvious. In view of Collette's teaching that the scavengers are activated by heat and moisture (), it would have been obvious to activate the scavengers with a hot product (7:61) containing moisture ()

**As to Claim 26**, Collette's teaching of the claimed process steps and ingredients, when used to form a package, would implicitly meet the claimed result.

**As to Claim 27**, Collette teach a method comprising the steps of: (a) forming a preblend/masterbatch (col 5 lines 6-7) comprising: a diluent polyester (col 5 line 17), a polyamide material (col 5 line 18), and an oxygen scavenging material (col 5 line 19); providing a virgin grade polyester (col 16, lines 12-14), and it is submitted that the remainder is substantially indistinguishable from virgin grade polyester; introducing the preblend and the polyester into a molding apparatus to permit melting and admixing of the preblend and the base polyester (col 5 lines 29-65); injection molding or extruding the admixture in the apparatus to provide a preform (fig 3, 59); and expanding the preform to provide a plastic container having a

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barrier layer formed from the admixture of the preblend and polyester (fig 6 & 7), wherein the plastic container and barrier layer has oxygen scavenging property that is activated after filling the container with an aqueous fluid (7:24-33, 7:59-63, 8:46-51). Collette also teaches forming bottles with catalysts that are activated by heat (7:32) and hot fill applications (7:61), which would therefore activate the catalyst during filling.

Collette does not explicitly teach (a) the admixture consists essentially of the preblend and virgin bottle grade polyester, or (b) the permeability change achieved by the filling with water. However, these aspects of the invention would have been prima facie obvious for the following reasons:

- (a) The admixture of Collette contains virgin PET (See Claim 28), but also contains post consumer PET. However, because the material is the same or substantially the same as the remainder of the preblend material, it would not materially affect the basic and novel characteristics of the invention, and thus this transitional language would still read on the method of Collette.
- (b) The claimed process steps and ingredients of Collette, when used to form a package according to Collette's teachings, would implicitly meet the claimed result.

**As to Claim 28**, Collette et al teach a transition metal oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million (col. 10, lines 23-37), the polyamide material is present in the preblend in an amount of about 10-50% by weight of the preblend (col 15 line 7-11), and the polyester comprising PET used in a percentage of about 50-90% (col 15, lines 3-4).

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**As to Claim 29**, Collette et al teach a transition metal oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million (col. 10, lines 23-37), the polyamide material is present in the preblend in an amount of about 10-50% by weight of the preblend (col 15 line 7-11), and the polyester comprising PET used in a percentage of about 50-90% (col 15, lines 3-4).

**As to Claim 30**, the base polyester contains virgin polyethylene terephthalate (col 16, lines 12-14).

**As to Claims 16, 31, and 32**, Collette et al teach a transition metal oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million (col. 10, lines 23-37), the polyamide material is present in the preblend in an amount of about 10-50% by weight of the preblend (col 15 line 7-11), and the polyester comprising PET used in a percentage of about 50-90% (col 15, lines 3-4). Collette et al also teach a transition metal oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million (col. 10, lines 23-37), which reads on the claimed amount or suggests the result-effective nature of this component.

### ***Response to Amendment***

2. The declaration under 37 CFR 1.132 filed 21 October 2009 is insufficient to overcome the rejection of the pending claims over Collette as set forth in the last Office action. The Examiner has carefully considered the declaration, however, the declaration does not appear to discuss what the "activation" process is. This matter is at the heart of the ongoing disagreement of the Collette reference. "Activation" has never been adequately defined in this case. The



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Examiner submits that Collette provides the claimed diluent, polyamide, and oxygen scavenging material in a preblend or masterbatch process (as in the claimed process), and Applicants do not appear to dispute these factual findings. If an oxygen scavenging material is already present in both the claimed process and Collette, which Applicants do not appear to dispute, why is it not already "activated" when it is placed in the preblend in both the claimed process and the Collette process?

***Response to Arguments***

3. Applicant's arguments filed 21 October 2009 and 22 March 2010 have been fully considered but they are not persuasive. The arguments appear to be on the following grounds:

- a) The Share declaration discusses the order of activation in Collette.
- b) The amendment to claim 31 incorporates agreed upon limitations.

4. These arguments are not persuasive for the following reasons:

a) The Examiner has made numerous attempts to understand what "activation" is. While both Collette and the instant specification use "activation" as a term of art, patentability in this case rests on the order of "activation" with respect to other steps. Since this is the case, it is important to know what process is occurring during "activation" in order to provide a basis for the Examiner to distinguish the claimed invention from the prior art. Since the claimed scavenger (or catalyst of Collette) appears to be merely a metal or metal salt, and since the claimed process teaches substantially the same process steps, it is unclear why "activation" occurs at some different point in the claimed invention than in the Collette process. The

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Examiner incorporates by reference the table at page 18 of the 18 July 2008 Non-Final Rejection, which illustrates the similarity between these processes.

The Share declaration filed 21 October 2009 discusses portions of the Collette reference, but does not clarify how the "activation" is achieved in a different order by Applicants. The declaration continues to point to an alleged difference in the order of activation in the Collette reference. However, the instant claims are drawn to a process. What aspect of the claimed process causes the alleged difference in activation? Since the claimed catalysts or scavengers are metals or salts, what is "activation" of a metal, and why are these scavengers not activated even before they are placed into a blend?

b) Amended claim 31 incorporates the agreed upon limitation, but notably excludes the monolayer previously recited by the claim. When the claim is not limited to a monolayer, it is not distinguishable from the Collette process.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW J. DANIELS whose telephone number is (571)272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew J. Daniels/  
Primary Examiner, Art Unit 1791  
6/21/10